Appln. No.: 09/403,071

Amendment Dated February 6, 2004 Reply to Office Action of October 6, 2003

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A digital AV data transmitting unit comprising:

data significance deciding means for-deciding the significance degree of digital AV data;

transmitting-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules;

transmitting-side authentication selecting means for selecting one type of rule from the transmitting-side plurality-of-authentication-rules storing means in accordance with a decision result by the data significance deciding means when receiving an authentication request; and

transmitting-side authenticating means for-performing authentication in accordance with the selected authentication rule;

wherein the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

2. (Currently Amended) A digital AV data receiving unit for communicating with a digital AV data transmitting unit having data significance deciding means for-deciding the significance degree of digital AV data, transmitting-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules, transmitting-side authentication selecting means for-selecting one type of rule from the transmitting-side plurality-of-authentication-rules storing means in accordance with a decision result by the data significance deciding means when receiving an authentication request, and transmitting-side authenticating means for-performing authentication in accordance with the selected authentication rule; the digital AV data receiving unit comprising:

authentication requesting means for requesting the authentication;

receiving-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules same as those stored in the transmitting-side plurality-of-authentication-rules storing means;

receiving-side authentication selecting means for-selecting the same authentication rule as the predetermined authentication rule selected by the transmitting-side authentication selecting means from the receiving-side plurality-of authentication-rules storing means; and



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receiving-side authentication means for-performing authentication at the receiving side in accordance with the selected authentication rule;

wherein the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

3. (Currently Amended) A digital AV data transceiving system comprising:

a digital AV data transmitting unit having at least-data significance deciding means for deciding the significance degree of digital AV data, transmitting-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules, transmitting-side authentication selecting means for-selecting one type of rule from the transmitting-side plurality-of-authentication-rules storing means in accordance with a decision result by the data significance deciding means when receiving an authentication request, and transmitting-side authenticating means for-performing authentication in accordance with the selected authentication rule; and

a digital AV data receiving unit having at least-authentication requesting means for requesting the authentication, receiving-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules same as those stored in the transmitting-side plurality-of-authentication-rules storing means, receiving-side authentication selecting means for-selecting the same authentication rule as the predetermined authentication rule selected by the transmitting-side authentication selecting means from the receiving-side plurality-of-authentication-rules storing means, and receiving-side authenticating means for-performing authentication at the receiving side in accordance with the selected authentication rule.

wherein the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

- 4. (Canceled)
- 5. (Original) The digital AV data transceiving system according to claim 3, wherein the transmitting unit has the functions of the receiving unit and the receiving unit has the functions of the transmitting unit.
- 6. (Currently Amended) The digital AV data transceiving system according to claim 5, wherein three or more of the transmitting units having the functions of the receiving unit or three or more of the receiving units having the functions of the transmitting unit are connected to each other so that digital AV data can be transferred to each other.
 - 7. (Currently Amended) A digital AV data transmitting unit comprising:



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transmitting-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules;

unit authentication rule information receiving means for-receiving the information for one type of authentication rule owned by a digital AV data receiving unit;

transmitting-side authentication rule fetching means for-fetching an authentication rule owned by the digital AV data receiving unit from the transmitting-side plurality-of-authentication-rules storing means in accordance with the information for the authentication rule received by the unit authentication rule information receiving means; and

transmitting-side authenticating means for-performing the authentication in accordance with the fetched authentication rule,

wherein the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

<u>a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.</u>

8. (Currently Amended) A digital AV data receiving unit for communicating with a digital AV data transmitting unit having transmitting-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules, unit authentication rule information receiving means for-receiving the information for one type of authentication rule owned by the digital AV data receiving unit, transmitting-side authentication rule fetching means for-fetching an authentication rule owned by the digital AV data receiving unit from the transmitting-side plurality-of-authentication-rules storing means in accordance with the information for the authentication rule received by the unit authentication rule information receiving means, and transmitting-side authenticating means for-performing the authentication in accordance with the fetched authentication rule; the digital AV data receiving unit comprising at least:

authentication requesting means for requesting the authentication;

receiving-side authentication rule storing means for-storing one type of the authentication rule of its own;

authentication rule information transmitting means for-transmitting the information for the authentication rule; and

receiving-side authenticating means for performing authentication in accordance with the authentication rule between this the receiving-side authenticating means and the transmitting unit.

wherein the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and



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<u>a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.</u>

9. (Currently Amended) A digital AV data transceiving system comprising:

a digital AV data transmitting unit having transmitting-side plurality-of-authentication-rules storing means storing a plurality of types of authentication rules, unit authentication rule information receiving means for-receiving the information for one type of authentication rule owned by the digital AV data receiving unit, transmitting-side authentication rule fetching means for-fetching an authentication rule owned by the digital AV data receiving unit from the transmitting-side plurality-of-authentication-rules storing means in accordance with the information for the authentication rule received by the unit authentication rule information receiving means, and transmitting-side authenticating means for-performing the authentication in accordance with the fetched authentication rule; and

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a digital AV data receiving unit having at least authentication requesting means for requesting the authentication, receiving-side authentication rule storing means for-storing one type of the authentication rule of its own, authentication rule information transmitting means for-transmitting the information for the authentication rule, and receiving-side authenticating means for-performing authentication in accordance with the authentication rule between this the receiving-side authenticating means and the transmitting unit,

wherein the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

- 10. (Canceled)
- 11. (Canceled)
- 12. (Original) The digital AV data transceiving system according to claim 9, wherein two or more of the receiving units are connected to the transmitting unit so that digital data can be transferred between the transmitting unit and the receiving units.
 - 13. (Canceled)
 - 14. (Canceled)
 - 15. (Canceled)
 - 16. (Canceled)
 - 17. (Currently Amended) A transmitting unit comprising:

enciphering means for enciphering digital AV data at a plurality of levels kinds corresponding to the significance degree of the data;

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authenticating means for-performing authentication requested from a receiving unit for receiving the enciphered digital AV data;

level deciding means for deciding an authentication level authenticated by the authenticating means; and

decoding-information selecting means for transmitting the decoding information having levels equal to and lower than the decided authentication level to the receiving unit in accordance with a request for the decoding information for decoding the enciphered digital AV data,

wherein the plurality of kinds includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

- 18. (Canceled)
- 19. (Canceled)
- 20. (Currently Amended) A transmitting unit comprising:

enciphering means for enciphering digital AV data at a plurality of kinds levels corresponding to the significance degree of the data;

authenticating means for performing the authentication requested from a receiving unit for receiving the enciphered digital AV data;

level deciding means for deciding an authentication level authenticated by the authenticating means; and

decoding-information selecting means for transmitting the decoding information having levels equal to or lower than the decided authentication level to the receiving unit in accordance with a request for the decoding information for decoding the enciphered digital AV data from the receiving unit,

wherein the decoding-information selecting means transmits requested decoding information to the receiving unit without performing the authentication procedure when decoding information is next requested from the receiving unit and the request is the decoding information having a level equal to or lower than the decided authentication level, and

the plurality of kinds includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

<u>a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.</u>



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21. (Canceled)

22. (Currently Amended) A digital AV data transceiving system comprising:

a transmitting unit having enciphering means for-enciphering digital AV data at a plurality of kindslevels corresponding to the significance degree of the data, authenticating means for performing the authenticating requested from a receiving unit for receiving the enciphered digital AV data, level deciding means for-deciding an authentication level authenticated by the authenticating means, and decoding-information selecting means for transmitting decoding information having a level equal to or lower than the decided authentication level in accordance with a request for the decoding information for decoding the enciphered digital AV data to the receiving unit, wherein the decoding-information selecting means transmits requested decoding information to the receiving unit without performing the authentication procedure when the decoding information is requested from the receiving unit and the request is the decoding information having a level equal to or lower than the decided authentication level; and

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the receiving unit having level deciding means for deciding an authentication level necessary to decode the enciphered data received from the transmitting unit, authenticating means for requesting the authentication of the decided authentication level to the transmitting unit, and decoding information requesting means for requesting decoding information having a level equal to or lower than the authentication level to the transmitting unit, wherein the decoding information requesting means for requesting requests decoding information having a level equal to or lower than the authentication level without performing the authentication when requesting the decoding information to the transmitting unit, and

the plurality of kinds includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

<u>a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.</u>

23. (Currently Amended) A digital AV data transmitting method comprising the steps of:

performing authentication for an authentication request sent from a receiving-side unit, deciding the authentication from a plurality of kinds corresponding to the significance degree of the data; and

transmitting the decoding information of each of enciphering methods corresponding to an authenticating method having a level equal to the authentication level and an authenticating method having a level lower than the authentication level to the receiving-side unit in accordance with a request for the decoding information sent from the receiving-side unit,

wherein the plurality of kinds includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

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a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

- 24. (Canceled)
- 25. (Canceled)
- 26. (Canceled)
- 27. (Canceled)
- 28. (Canceled)
- 29. (Canceled)
- 30. (Canceled)
- 31. (Currently Amended) A digital AV data transmitting unit comprising:

authenticating means for performing authentication by selecting one type of authentication rule out of a plurality of types of authentication rules, control criterion storing means storing a predetermined control criterion for a receiving unit, and authentication deciding means for deciding whether to perform authentication by referring to the stored control criterion when receiving an authentication request from the receiving unit,

wherein the identification information for the control criterion corresponding to the receiving unit is provided for the receiving unit for requesting the authentication from an external control center when the receiving unit has only a function for performing authentication in accordance with only a[[n]] low-significance-degree authentication rule incapable of having the control criterion and the authentication deciding means of the transmitting unit receives the identification information when requesting the authentication but and cancels the authentication when the identification information is unqualified for authentication, and

the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

32. (Currently Amended) A digital AV data receiving unit comprising:

authentication requesting means for-requesting authentication to a digital AV data transmitting unit having authentication deciding means for-deciding whether to perform authentication by referring to a predetermined control criterion for the receiving unit stored in control criterion storing means when receiving an authentication request from the receiving unit and authenticating means for-performing authentication in accordance with only the low-significance-degree authentication rule incapable of having the control criterion, to which



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identification information for the control criterion corresponding to the receiving unit is given from an external control center,

wherein the authentication deciding means of the transmitting unit receives the identification information when requesting the authentication but and cancels the authentication when the identification information is unqualified for authentication, and

the authentication uses rules including a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

<u>a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.</u>

33. (Currently Amended) A digital AV data transceiving system comprising:

a digital AV data transmitting unit having authenticating means for performing authentication by selecting one type of authentication rule out of a plurality of types of authentication rules, control criterion storing means storing a predetermined control criterion for a receiving unit, authentication deciding means for deciding whether to perform authentication by referring to the stored control criterion when receiving an authentication request from the receiving unit; and

a digital AV data receiving unit having for-authentication requesting means requesting the authentication to the transmitting unit and authenticating means for-performing authentication in accordance with only the low-significance-degree authentication rule incapable of having the control criterion, to which the identification information for the control criterion corresponding to the receiving unit is given from an external control center,

wherein the authentication deciding means of the transmitting unit receives the identification information when requesting the authentication but-and cancels the authentication when the identification information is unqualified for authentication, and

the plurality of types of authentication rules includes a first rule configured to use a public key and a secret key to provide a first type of encryption having high-security against forgery or alteration, and

a second rule configured to use a common key to provide a second type of encryption having low-security against forgery or alteration.

- 34. (Original) The digital AV data transmitting unit according to claim 31, wherein the predetermined control criterion is a reference list capable of identifying an illegal or unjust digital AV data receiving unit and the identification information serves as an ID for the control criterion corresponding to the receiving unit and a signature for the ID.
- 35. (Original) The digital AV data transmitting unit according to claim 34, wherein the authentication deciding means cancels the authentication when at least either of the ID and the signature is unqualified for authentication.



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- 36. (Original) The digital AV data transmitting unit according to claim 34 or 35, wherein the signature is generated by using an identification ID previously intrinsically added to each receiving unit.
- 37. (Original) The digital AV data receiving unit according to claim 32, wherein the predetermined control criterion is a reference list capable of identifying an illegal or unjust digital AV data receiving unit and the identification information serves as an ID for the control criterion corresponding to the receiving unit or a signature for the ID.
- 38. (Original) The digital AV data receiving unit according to claim 37, wherein the authentication deciding means cancels the authentication when at least either of the ID and the signature is unqualified for authentication.
- 39. (Original) The digital AV data receiving unit according to claim 37 or 38, wherein the signature is generated by using an identification ID previously intrinsically added to each receiving unit.
- 40. (Original) The digital AV data transceiving system according to claim 33, wherein the predetermined control criterion is a reference list capable of identifying an illegal or unjust digital AV data receiving unit and the identification information serves as an ID for the control criterion corresponding to the receiving unit and a signature for the ID.
- 41. (Original) The digital AV data transceiving system according to claim 40, wherein the authentication deciding means cancels the authentication when either of the ID and the signature is unqualified for authentication.
- 42. (Original) The digital AV data transceiving system according to claim 40 or 41, wherein the signature is generated by using an identification ID previously intrinsically added to each receiving unit.
 - 43. (Canceled)

